Before the
Federal Communications Commission
Washington, D.C. 20554

In The Matter Of	)	
	)	
Administration of the North American Numbering Plan	)	**CC Docket No. 92-237**

COMMENTS OF

THE SOUTHERN NEW ENGLAND TELECOMMUNICATIONS CORPORATION

The Southern New England Telecommunications Corporation (SNET) respectfully submits the following comments in response to the Notice of Inquiry (NOI) released by the Federal Communications Commission (Commission) on October 29, 1992.[1]

SNET is an independent telecommunications company with operating subsidiaries engaged principally in network services, cellular mobile radio and paging services, communications equipment and information management systems. Through its telephone subsidiary, The Southern New England Telephone Company, SNET provides regulated local exchange and access toll services for over 1.8 million access lines within the State of Connecticut.

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[1] In The Matter of Administration of the North American Numbering Plan, CC Docket No. 92-237, adopted October 9, 1992, released October 29, 1992, FCC 92-470 (NOI).

I. Introduction.

Through its NOI the Commission is exploring several long range issues related to the administration of the North American Numbering Plan (NANP). Phase One of the NOI focuses on who should administer the NANP and how that administration might be improved. The Commission also seeks comments in this phase on numbering for personal communications services and local number portability. In Phase Two, the Commission seeks comments on the costs, benefits, and technical issues associated with expanding the Carrier Identification Codes used for Feature Group D access to a four-digit format.

II. The NANP Administration Should Remain With Bellcore Until 1995.

The Commission invited comments on the advisability of transferring the NANP Administration (NANPA) to an administrator other than Bellcore.[2] SNET believes that the administration of the numbering plan should remain with Bellcore through 1995 or when the conversions to four-digit Carrier Identification Codes (CICs) and interchangeable Numbering Plan Areas (NPAs) are expected to be completed. A change in administration during this crucial time would be disruptive and not in the public interest.

The NANPA, as presently situated, benefits from its relationship with Bellcore. Current NANPA personnel have extensive telecommunications backgrounds that make them effective managers of the NANP resource. The combined resources of Bellcore and NANPA would be difficult, if not impossible, to replicate outside of Bellcore at this time. SNET believes that the Commission should move cautiously in making changes to the administration of the NANPA, and that the Commission's focus should not be on who administers the NANPA, but rather on whether the processes and procedures followed insure that all numbering issues from all service providers are treated with impartiality and in a timely manner.

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[2] NOI, para. 28.

III. The Current NANPA Oversight Is Adequate, Structural Separation Within Bellcore Is Supported, And Commission Oversight Should Be Limited To Public Good.

The Commission questions if the NANPA remains at Bellcore for the foreseeable future, what advisory or oversight bodies, if any, should be established.[3] Currently, the NANPA organization looks to the Exchange Carrier's Standards Association (ECSA) sponsored Industry Carrier's Compatibility Forum (ICCF) for industry input into administrative issues that arise from time to time. Occasionally, technical numbering issues associated with new applications, such as PCS, are worked on in the ECSA sponsored T1 committees upon referral there by industry participants. SNET believes that these forums take advantage of the resources of the industry, using established consensus-building processes, to advise and direct the NANPA. SNET believes, however, that an industry advisory board established specifically for the NANPA that has representation from all sectors of the industry has merit. A representative participation by a broad array of providers will enhance the NANPAs ability to respond to the wide array of numbering issues that will need to be addressed in the future.

The Commission further asks whether formal structural separation should be between the NANPA and the rest of Bellcore?[4] The NANPA organization currently functions as an autonomous entity within Bellcore. Although SNET believes that the present structure has worked well, structural separation between NANPA and other Bellcore entities would allay concerns about the NANPA's relationship to Bellcore and avoid any perception of any conflict of interest. SNET sees no need to physically relocate the NANPA from current Bellcore facilities. In fact, NANPA benefits from its access to Bellcore expertise and resources not in the NANPA organization. These resources would be both costly and difficult to duplicate in a physically separated NANPA organization.

As to how the Commission should oversee Bellcore or any other entity charged with plan administration,[5] SNET believes that the NANP should be administered by the industry.

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3 NOI, para. 32.
4 Id.
5 Id.

Commission oversight should be limited to broad review of numbering issues identified by the NANPA or other interested parties. Beyond this broad oversight, the Commission should only intervene in specific numbering issues where industry forums cannot reach consensus.

IV. There Are Benefits To International Number Plan Administration.

The Commission seeks comments generally on the costs and benefits of an internationally integrated numbering plan and integrated centralized administration.[6] The current North American numbering plan supports the public interest by permitting international dialing between areas of the world where there is a high community of interest, for example the U.S. and Canada, the U.S. and the Caribbean Islands. Because this plan requires fewer dialed digits, fewer network resources are required to receive, process and transmit international calls. An alternative international dialing plan would increase dialed digits, with a consequent loss of efficiency and increase in cost.

Dividing up World Zone 1 (WZ1) into separate zones would require changes in every WZ1 switch. Further, subscribers in the new zones would be required to have new international numbers. For example, if Canada retained WZ1 and the U.S. became WZ999, every U.S. subscriber's international number would change from 1-NXX-NXX-XXXX to 999-NXX-NXX-XXXX. SNET believes that the costs of this change would not be worth the benefits that would be gained - reclamation of fewer than 20 Numbering Plan Area codes.

If a single WZ1 (multinational) numbering domain is to be continued, centralized administration will be necessary, simply to avoid chaos. Should integration be eliminated, then each nation would require its own numbering administration, creating a potentially horrific maze of numbering schemes.

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[6] NOI, para. 28.

V. **The Costs Of Feature Group D CIC Expansion Are High But Necessary.**

The Commission asks the following questions as to whether it is worthwhile to move from 10XXX to 101XXXX access:

1. What are the costs and technical issues associated with converting FGD CIC codes to a four-digit format?[7]

SNET estimates that its FGD CIC expansion will cost from $15 million to $18 million for the Connecticut network. This estimate includes switch software upgrades, memory additions, support and billing system changes that would be required.

It is expected that significant effort will be required to implement the changes in the network. Every switch will require software modifications, and some will require hardware modifications. Translation changes will be required for every subscriber line and every access trunk group. Support systems used to process Access Service Requests, and the Carrier Access Billing System (CABS) will require upgrades to accommodate the four-digit CIC. Moreover, this change in format will require hardware additions and software modifications to older technology switches that would otherwise not be upgraded as well as additional software features that would not otherwise be required.

2. What are the benefits of CIC Code expansion implementation and how do the benefits compare with the costs?[8]

The benefit of code expansion is that future access service requests can be fully met. At present, SNET has a total of 32 FGD CICs in service, sufficient capacity for the foreseeable future. However, if a new access provider were to request the establishment of FGD service and the NANPA had no three-digit CICs to assign, SNET would have no choice but to deny the request.

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7 NOI, para. 38.
8 Id.

SNET recommends that the Commission consider alternatives to the available options presented: i.e. either no CIC expansion or network wide flash cut. For example, SNET would prefer to expand new CICs only in those offices where it is requested. Availability by location could be negotiated between the LEC and the access provider. This would minimize the cost and confusion that would otherwise result from a network-wide flash cut, but provide additional CICs if needed.

VI. CIC Codes Should Be Conserved By The Industry.

The Commission requested alternative technical approaches that would allow all long distance carriers and other end users to achieve equal access.[9] The industry has investigated "Sectorization" as a possible alternative to expansion of CIC codes format. With sectorization a pool of CICs would be allocated to nationwide service provider use and another pool would be reused in a number of sectors across the country. Sectorization was not favored for several reasons: (1) No motivation exists for a niche market or regional provider to voluntarily subscribe to a CIC with geographic limits as long as nationwide alternatives exist; (2) LECs that span the country and have centralized billing systems would have to make major billing system changes to accommodate multiple reuse of CICs across their operating territory; and (3) There are substantial complications in implementing multi-assigned CICs in nationwide data base services such as 800 data base access service.

The only viable alternatives to expanding the format are to make more productive use of the three-digit format through some form of code sharing, or acknowledging that when the codes run out, that no new entrants will be supported. After extensive review, the ICCF found that neither alternative could be supported.

The Commission further asks if FGD codes are not expanded, what rules should govern the assignment, recall, transfer and use of the FGD codes that will be available?[10]

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9 NOI, para. 38.
10 See Id.

SNET believes that, in view of the costs of expansion, FGD CICs should be treated like scarce commodities, and present holders should be given incentives to find ways to make more productive use of the existing resource that includes (not excludes) new entrants to the market place. SNET believes that the industry and its customers are in the best position to work out arrangements between themselves to make effective use of CIC codes, and that it is not necessary for the Commission to initiate a rulemaking proceeding to accomplish that same end.

VII. Personal Communications Service Number Assignments Should Be Handled In A Uniform, Fair, And Impartial Manner.

The Commission indicates that the numbering schemes used for Personal Communications Services are important and are the subject of both domestic and international discussions. Although this issue is now being considered in other forums, comment is sought on what actions should be taken by the Commission to foster such services.[11] SNET believes that: (1) All domestic authorized telecommunications service providers require equal access to numbering resources, including geographic and non-geographic numbers; (2) Uniform guidelines should be used for the assignment of numbering resources; (3) All (domestic authorized) telecommunications providers should be able to request and obtain the numbering resources necessary to offer their service; and requests and assignments should be handled in a uniform, fair, and impartial manner; numbering resources should be made available for non-geographic wireless personal communications services; (4) Assignment guidelines should not restrict the manner in which any authorized provider implements a service using either geographic or non-geographic numbering resources; and (5) Industry forums such as the ICCF, and national standards bodies (e.g., ECSA Committee T-1, EIA TR45, etc.) should continue to be used to address numbering related issues.

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[11] NOI, para. 40.

VIII. Local Number Portability Has Limited Feasibility At This Time.

The Commission states that Competitive Access Providers (CAPs) argue that the inability of customers to change carriers without changing telephone numbers provides a barrier to local competition and urge the Commission to investigate local number portability. The Commission seeks comments on the costs and feasibility of local number portability, and information on the lessons learned from the experience of implementing number portability for 800 services.[12] SNET believes local number portability in today's network is feasible only to a very limited degree.

At a minimum, routing and rating systems are significantly impacted by number portability. Other support systems are also impacted, but the impacts could be managed if number ranges assigned to the CAPs are excluded from the systems. These technical problems stem from the fact that NXX codes are: 1) usually not shared between switching entities, and ; 2) are usually shared by many subscribers (i.e., not dedicated to the CAP's subscriber).

Typically NXX's are assigned to geographic areas today. Subscribers expect NXX's to indicate a geographic area (i.e., city, town, community, etc.). Portable NXX could create considerable subscriber confusion. If the NXX code were dedicated to the CAP's subscriber, the NXX code could simply be transferred to the CAP's switch with routing and rating systems adjusted accordingly. If the NXX code is shared by several users, and the CAP's subscriber is using specific thousand block ranges (e.g., 242-3000 to 242-4999), it is possible to split the routing of terminating traffic at a tandem switch common to both the LEC and CAP switches. This might require ICs to translate and route on more digits than is common practice today. Traffic to/from the number range in the CAP switch from/to the LEC end office switch would require special translations and routing arrangements between switches. Established (nationwide) rating algorithms that associate originating and terminating NPA-NXX codes with geographic vertical and horizontal coordinates to determine point-to-point distances would

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[12] NOI, para. 41.

require significant changes to support NPA-NXX-X to NPA-NXX-X calculations. Such changes would involve increasing table sizes, increasing administration effort, and would possibly increase call processing delay.

Hundred block code splitting (e.g., 242-3200 to 242-3499) presents the same issues as thousand block splitting and would increase the size of routing and rating tables by another order of magnitude.

A geographic NPA-based data base system similar to the 800 data base for individualized number treatment is a feasible concept. However, such a data base would have to be defined and developed for each geographic NPA. Call set up times would be impacted by the need to query a data base for every call. Advanced Intelligent Network (AIN), and end office Service Switching Point (SSP) functionality would be necessary to support routing between NXX code sharing switch entities. Furthermore, Interexchange Carriers (ICs) would need to have the means to query each such data base to determine the terminating switch - LEC, CAP, or other. Established rating systems, and all other support systems from service negotiation to trouble report handling would have to be redesigned. As a result, nationwide deployment of such a system could probably cost several hundred times what 800 data base will cost, and would take an indeterminate length of time, since AIN is still in the development stages and no work of this nature has begun.

IX. **Conclusion.**

The telecommunications industry is changing at a rapidly increasing rate each year, and the need to adapt the North American Numbering Plan to these changes is imperative. SNET urges the Commission not to delay its investigation in this proceeding, as substantial numbering resources will be required for the multitude of new service offerings that will use the Numbering Plan.

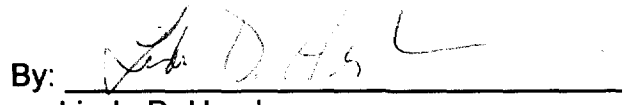
The Feature Group D CIC expansion will have a significant impact on every facet of the exchange carriers' networks. This impact will be reflected in required hardware and software changes, resulting in extremely high cost burdens in order to meet the needs of customers.

Accordingly, the manner in which the Commission decides to deploy the CIC expansion will have a long lasting economic impact on carriers and their ratepayers and this issue merits careful consideration at this time.

SNET urges the Commission to seek a balanced approach and permit carriers to deploy expansion on a customer-need basis, rather than incur the costly network-wide flash cut which would produce increased revenue requirements for costly network changes.

Respectfully Submitted,

The Southern New England
Telecommunications Corporation

By: 

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December 28, 1992

CERTIFICATE OF SERVICE

I, Melanie Raycroft, hereby certify that a copy of the foregoing Southern New England Telecommunications Corporation Comments on the Administration of the North American Numbering Plan, CC Docket No. 92-237, was sent by first-class mail, postage prepaid, on this the 28th day of December, 1992, to those listed below.

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